



Land Rover North America, Inc.



13 October, 2000

**Mr. Kenneth N. Weinstein
Associate Administrator for Safety Assurance
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
U.S. Department of Transportation
400 7th Street, SW
Washington, DC 20590**

**RE: Recall Campaign - Coolant System Durability
95 to 99 MY Land Rover Range Rover**

Dear Mr. Weinstein:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act of 1966 and 49 CFR Part 573, and as a follow-up to our Defect Information Report of June 1998 on the same subject.

Pursuant to Section 573.5 (c) of the above, we submit the following information:

1. Manufacturer Corporate Name:

**Land Rover Group Ltd.
Solihull, United Kingdom**

Affiliated U.S. Importing Company and Agent:

**Land Rover North America, Inc.
4371 Parliament Place
PO Box 1503
Lanham, MD 20706**

**Land Rover North America, Inc.
4371 Parliament Place
PO Box 1503
Lanham, Maryland 20706
United States of America
Telephone 301 731-8040
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2. Identification of Affected Vehicles:

Based on analysis of the failure modes and the dates of manufacture of the subject components, the following vehicle population has been identified.

Model	Component	Model Year	VIN Range	Production Period
Range Rover	Coolant Hoses STC4114k	1995 to 1999	SALPV1243- SA302295 to SALPA1249 - XA410021	October 1994 to August 1998
Range Rover	Throttle Body MNB101890	1999	SALPV144X - XA400939 to SALPV1442- XA418690	July 1998 to January 1999

3. Total Number of Vehicles Potentially Affected:

A total of (25,033 Coolant hoses)(2,957 Throttle body) = 27,990 vehicles built for sale in the United States are affected by this recall.

4. Percentage of Vehicles Estimated to Actually Contain the Defect:

All vehicles within the VIN ranges in 2. above, may potentially exhibit a defect during service.

5. Description of the Defect:

Coolant system leaks have been identified in areas where the coolant could be subjected to elevated temperatures. Consequently, there is a potential that the fluid may ignite causing an under-hood vehicle fire.

This situation can occur by the failure of the coolant hose(s) liner material leading to rupture of the hose or the failure of the throttle body "de-icer plate" gasket. (The hoses involved include those that were supplied for a previous safety recall #98V-149 and original equipment production).

Coolant Hose

The coolant hose liner material may be contaminated with tiny (30-50 micron) particles of an extremely hard carbon compound. The presence of these particles induces a fatigue failure mechanism, which leads to longitudinal cracking and splitting of the hose liner.



Throttle Body Gasket

The cast alloy throttle body is heated by fluid bled from the cooling system, to prevent icing in extremely cold weather conditions. This fluid passes through a small attachment (plate) to the throttle body, which utilises a cork gasket. However, due to the under-hood environment of Range Rover, in terms of system temperature and pressure, the cork gasket has proven to be unreliable in this application. Consequently, coolant fluid can leak from the interface between the de-icer plate and the throttle body.

Coolant hose(s) rupture or a throttle body gasket leak, will result in loss of coolant fluid. Engine overheating and subsequent engine damage may result if the vehicle continues to be operated. In extreme circumstances, should this coolant collect on high temperature regions of the engine, there is the possibility that the coolant fluid could ignite.

Land Rover has received no reports, nor is Land Rover otherwise aware of any accidents or injuries resulting from this defect.

6. Chronology of Principal Events:

In July 1998, Land Rover instigated a safety recall of Range Rover vehicles to address the potential of under-hood fires following an investigation by Land Rover and external consultants. This action encompassed a number of potential causes of under-hood fires, including the replacement of defective coolant hoses with those of an alternative material and construction, supplied by a different manufacturer. At that time, OE production was also switched to the revised hose type.

In January 1999 a revised throttle body de-icer plate gasket was introduced as a result of early market analysis that showed there was a tendency for the gasket to weep and cause visible staining of the throttle body. This throttle body design was new for 1999 model year vehicles with Bosch engine management systems.

In September 1999, the first reports of coolant leakage on vehicles which had already undergone the fix identified in safety recall #98V149,

including the failure of the revised coolant hose(s), were received. An investigation began in order to find the cause of the hose failures, which involved detailed examination of manufacturing and assembly processes at Land Rover and the supplier of the coolant hoses. Analysis of failed hoses returned from the field and other hoses of the same type which had not failed, showed that failure was consistent with the inclusion of the carbon particles.

Further investigation determined that the particles were only present in hoses manufactured before week 35 of 1998. A corresponding change in the raw material supplier's process has subsequently been identified. Vehicles that have had the aforementioned recall action carried out or were originally built with the suspect hoses are considered to be at risk. We are still investigating the most appropriate recall fix to take and expect our analysis to be complete at the end of October 2000.

In addition, continued monitoring of warranty returns on the throttle body gasket had shown an increase in the failure rate and a more severe failure mode (i.e. coolant leakage as well as weeping) of the original cork gasket.

Land Rover has therefore concluded that in the interest of motor vehicle safety, and further to the original recall campaign, additional action should be taken to address the issues described above.

7. Case of Non-Compliance

Not Applicable

8. Description of Corrective Repair Action

The coolant hose(s) repair action is not yet identified. Timing for the action is expected to follow our analysis process, allowing for adequate lead-time to procure the necessary parts.

The throttle body gasket, de-icer attachment, and securing hardware will be replaced with the current production design. This action should proceed on the 5th December 2000

As the original campaign is still active (ref: Land Rover campaign number D321-325, NHTSA number 98V-149), new service bulletins will include the original campaign repair items.

9. Copies of Dealer Communications

Copies of the dealer notification documents (service bulletin and technical information bulletin (TIB)) will be submitted to NHTSA when available.

10. Copy of Owner Communication

Draft copies of the customer notification letter will be sent for NHTSA review in the near future.

11. Manufacturer's Campaign Number

Land Rover's campaign number is:

D221 = SA302295 to WA402293 Hoses - plus completion of outstanding actions from 98V-149 campaign.

D222 = SA302295 to WA410481 Hoses - 98V-149 campaign previously completed.

D223 = XA410482 to XA418689 Throttle body de-icer gasket.

Should there be any questions regarding this report, please contact me at (301) 731-8583.

Sincerely,



Dennis Johnston
Manager, Regulatory Compliance